

**Oral History Program: Biographical Notes**

**Aubrey Darnell HOSKING (1919 - )**

**Soils Engineer**

- Birth & Family:** Born 24 February 1919, in South Perth, Western Australia. Married to Thelma (*When?*).
- Qualifications:** BE (1<sup>st</sup> Class Hons) University of Western Australia; Diploma of Membership of the Imperial College of Science and Technology, London, 1954; Fellow of Geological Society of London; Member of the Institution of Engineers, Australia.
- Memberships:** FIEAust.
- Awards:** The Institution Award, The Institution of Engineers Australia, 1963  
Glenn Travelling Fellowship 1953-54  
The Winzer-Telford Prize in Civil Engineering, University of Western Australia, 1952  
Nunn Prize in Surveying, University of Western Australia, 1950
- Work History:** After leaving school, Hosking worked in the Crown Law Department before enlisting in the Army. He became interested in engineering and surveying when working on roadworks and other engineering projects while a prisoner of war of the Japanese. A Red Cross worker, Alfred Dobb, who had been a wealthy peacetime contractor, had formally established the Changi Structural Engineering Studentship in the camp and Hosking won first prize of £500, which later funded postgraduate studies.
- After the war, he took up a Commonwealth Reconstruction Training Scheme (CRTS) offer to study engineering at the University of Western Australia.
- In 1951 Hosking joined the Snowy Mountains Hydro-Electric Authority as Soils Engineer to run the Soils Section of the Scientific Services Division and was sent to Sydney to set up the laboratories.
- In 1952 Hosking was one of a group of SMA engineers sent to the US Bureau of Reclamation in Denver, Colorado for accelerated training on such projects as power stations, major dams and irrigation schemes.
- Returning to Australia at the end of 1952, Hosking was placed as Engineer in Charge of the Kosciuszko Dam investigation, a project which did not proceed mainly because of conservation considerations (an abutment of the proposed dam was on the David glacial moraine).
- The years of 1953-54 were devoted to postgraduate study at the Imperial College in London.
- In the period 1955-64 Hosking was the Head of Soils Section within the Materials Branch of the Snowy Mountains Hydro-Electric Authority. His main responsibilities were field and laboratory investigation, involving explorations in the early stages of dam investigation to locate materials for their construction and to carry out relevant laboratory testing. This

involved locating sources of earth, gravel and sand for earth dams and aggregates for concrete dams. He also recommended and advised on the design and development of dams that would be the most suitable for their chosen sites.

Hosking believed that the proposed Geehi Dam was totally unsuitable for the selected site due to danger of landslides, therefore he chose a new site which changed the whole scheme, and as well as being better, it was also cheaper.

Hosking was also engaged on foundation studies for all dams and many other major works, especially tunnelling, which were under investigation, design or construction at the time. These included Guthega Dam, Tooma Dam, Tantangara Dam, Eucumbene Dam, Tumut Pond Dam, Khancoban Dam, Island Bend Dam, Blowering Dam and associated tunnels and power stations.

Research and development work was carried out by Hosking in such areas as field and laboratory testing and equipment; rock mechanics and rock support systems with detailed development of grouted rockbolting techniques and equipment; developing and improving dam instrumentation which included an earth settlement device; and a new design for pressure sensors which was later exported and used around the world.

In 1964 Hosking became Head of the Earth & Rock Materials Branch and was closely associated with Talbingo, Jindabyne and Tooma Dams. During his time there, a chemical grout - AM9 - consisting of a mix of 2 chemicals, was used to waterproof Tooma Dam; this was a first for Australia.

Hosking also made recommendations resulting in the sophisticated design of the innovative sloping core for Jindabyne Dam, and made a substantial contribution to rock excavation in terms of rockbolting work in tunnels and underground power stations.

In 1971 Hosking commenced working for the Snowy Mountains Engineering Corporation (SMEC) as Head of Materials Branch, which covered field work, laboratory operation and administration, as well as earth and rock materials, concrete, metal testing and the operation of a large machine shop.

After completion of the Thompson and Dartmouth Dams in Victoria, most major projects for SMEC from that time on were in Asia and Africa, usually in very primitive conditions. These projects included a canal in Bougainville, and damsite investigations in Java, Papua New Guinea, and Ghana.

From 1979 to 1985 Hosking worked as a private consulting engineer engaged on many small projects or with minor involvement in larger projects, including dams in Indonesia and China.